Proposed Determinations of Failure to Attain the 1-hour Ozone Standard for

San Joaquin Valley, South Coast and Southeast Desert

9/2/2011

Summary

- EPA is proposing to determine that the San Joaquin Valley (SJV), South Coast (SC) and the Southeast Desert 1-hour ozone nonattainment areas in California have failed to attain the 1-hour ozone standard by their required deadlines.
- In 1997, the EPA established a new 8-hour ozone standard (0.08 ppm), which replaced the older 1-hour ozone standard (0.12 ppm). The 8-hour standard is more protective of human health because it addresses the impacts of exposure over longer periods of time.
- The 1-hour ozone standard was revoked on June 15, 2005. However, as required by the Clean Air Act (CAA) to prevent backsliding in air quality, EPA is continuing to implement certain CAA requirements for the 1-hour ozone standard by proposing to determine that the SJV, SC and Southeast Desert failed to attain the one-hour ozone standard by their applicable attainment dates.
    - If finalized, today's determinations would ensure that the requirements are met for contingency measures and fee programs in these three areas. There would therefore be no backsliding on air quality measures as a result of the transition from the 1-hour ozone standard to the 8-hour ozone standard.
    - These requirements will continue to be required until the areas achieve the 1-hour ozone standard.

Background

- Ozone pollution can cause inflammation and irritation of respiratory airways, coughing, shortness of breath, reduced lung function, asthma symptoms and increased hospitalizations for respiratory causes. Children and elderly are most impacted by ozone pollution.
- In 1997, EPA chose an 8-hour instead of a 1-hour standard, because ozone can produce effects of concern at lower concentrations for prolonged exposure of 6 to 8 hours. The members of the Clean Air Scientific Advisory Committee, who advise the Administrator on setting standards, were unanimous in recommending a change from a 1-hour to an 8-hour standard.
- EPA will soon take action on the 1997 8-hour ozone plans for the SC and SJV.
- Ground-level ozone is formed when nitrogen oxides (NOx) and volatile organic compounds (VOCs) react in the atmosphere in the presence of sunlight. NOx and VOCs are called ozone precursors. Motor vehicle exhaust, industrial emissions, and chemical solvents are the major sources of these chemicals. Ozone pollution is a concern especially when the weather conditions needed to form it, lots of sun and hot temperatures occur.

Next Steps

- EPA is providing a 30-day public comment period on this action.

For More Information

http://www.epa.gov/region9/air/actions/ca.html

News Releases from Region 9

U.S. EPA proposes San Joaquin Valley, South Coast, Southeast Desert as failing to meet one hour ozone air standard

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SAN FRANCISCO – With the continuing goal of improving air quality for millions of Californians, the U.S. Environmental Protection Agency announced today that it is proposing to find that the San Joaquin Valley, and California's South Coast and the Southeast Desert have failed to meet the 1-hour ozone standard by their required deadlines. Children and the elderly are most impacted by ozone pollution.

The 1-hour ozone standard was superseded in 2005 by the health-based 8-hour ozone standard. However, EPA is required to continue to implement federal Clean Air Act requirements for the 1-hour ozone standard to prevent deterioration in air quality.
In 1997, the EPA first established the 8-hour ozone standard (0.08 ppm), which replaced the older 1-hour ozone standard (0.12 ppm). The 8-hour standard is more protective of human health because it addresses the impacts of exposure over longer periods of time. EPA will soon propose actions on the South Coast and San Joaquin Valley air quality plans for 8-hour ozone.

Ground-level ozone is formed when nitrogen oxides (NOx) and volatile organic compounds (VOCs) react in the atmosphere in the presence of sunlight. NOx and VOCs are called ozone precursors. Motor vehicle exhaust, industrial emissions, and chemical solvents are the major sources of these chemicals. Ozone pollution is a concern especially when the weather conditions needed to form it, lots of sun and hot temperatures occur. Ozone pollution can irritate airways, worsen asthma symptoms and increase hospitalizations for respiratory cases.

EPA is providing a 30-day public comment period on the 1-hour ozone proposed actions. For more information, please visit: http://www.epa.gov/region9/air/actions/ca.html

Questions and Answers (INTERNAL)

1. Why should we be concerned about ozone?

Ozone pollution can cause inflammation and irritation of respiratory airways, coughing, shortness of breath, reduced lung function, asthma symptoms and increased hospitalizations for respiratory causes. Children and elderly are most impacted by ozone pollution.

2. Where does ozone come from?

Ground-level ozone is formed when nitrogen oxides (NOx) and volatile organic compounds (VOCs) react in the atmosphere in the presence of sunlight. NOx and VOCs are called ozone precursors. Motor vehicle exhaust, industrial emissions, and chemical solvents are the major sources of these chemicals. Ozone pollution is a concern especially during the summer months when the weather conditions needed to form it, lots of sun and hot temperatures normally occur.

3. Why is EPA taking this action?

SJV, SC and Southeast Desert areas have failed to attain the 1-hour ozone standard by their required deadlines. These deadlines were as follows: November 15, 2010 for SC and SJV (both extreme areas) and November 15, 2007 for the Southeast Desert (severe-17 area).

EPA is proposing this action because we are obligated to ensure implementation of one-hour ozone anti-backsliding requirements that are given effect through today's determinations of failure to attain.

4. How will this finding of failure to attain lead to improved air quality? What will it do that is not currently being done?

If finalized, today's determinations would ensure that the requirements are met for contingency measures and fee programs in these three areas. There would therefore be no backsliding on air quality measures as a result of the transition from the 1-hour ozone standard to the 8-hour ozone standard. These requirements will continue to be required until the areas achieve the 1-hour ozone standard.

5. How much will be collected through the section 185 fee program and how will the money be used?

SJV intends to use the collected 185 fees to improve air quality and the public health in the local communities. Of the total $30 million collected each year approximately $24 million will come from the $12 DMV registration fees and approximately $6 million from large facilities. Over the next several years, the SJV air district intends to spend $100 million on clean school buses in the SJV. Additional projects may include, reducing emissions from gross polluting vehicles, heavy duty trucks and locomotives.

SC and Southeast Desert have 185 fee rules in place that are in effect as a matter of state law but have not yet been approved by the EPA. We expect to propose action on these rules in 2012.

6. What are the contingency measures for the 1-hour ozone plans that will be officially triggered?

Even though the attainment deadline for the 1-hour ozone SIPs in California was 2007 for Southeast Desert and 2010 for SC and SJV, vehicle fleet turnover continues to generate more emissions reductions beyond attainment dates such as 2010. These additional emissions reductions meet the purpose of contingency measures which is to ensure progress towards attainment after a milestone/deadline is missed.

7. Are you requiring a new 1-hour plan?

This proposal does not require a new plan. However, this finding of failure to attain will ensure that the anti-backsliding measures such as section 185 fees and contingency measures continue to be implemented until the areas achieve the 1-hour ozone standard.

All on-going efforts to meet the 8-hour ozone (or even the PM standards) will help to improve air quality and meet the 1-hour standard.

8. If you required a new 1-hour plan, wouldn't their attainment date be sooner and therefore better for the public?

The 1-hour standard has been revoked and replaced with a new more protective 8-hour standard. All on-going efforts to meet the 8-hour ozone (or even the PM standards) will help to improve air quality and meet the 1-hour standard.

9. What makes 8-hr standard more protective than the 1-hr?

In 1997, the EPA established a new 8-hour ozone standard (0.08 ppm), which replaced the older 1-hour ozone standard (0.12 ppm). The 8-hour standard is more protective of human health because it addresses the impacts of exposure over longer periods of time. This decision was based on extensive assessment of more than 3,000 published studies on effects of ozone, as well as on ozone monitoring and ambient air quality levels. Many studies showed that health effects occur at levels lower and at exposure time longer than previously believed. This was also the unanimous recommendation of the Clean Air Scientific Advisory Committee.

10. How does this decision take the site relocation into account from Arvin-Bear Mountain Road to Arvin-DiGiorgio?

The ozone monitor at Arvin-Bear Mountain Road site shut down on November 4, 2010. Since the monitor was operating throughout the entire high ozone season of 2010 and we used the data from that site in our analysis, our conclusions are unaffected by the more recent relocation of the Arvin site from Bear Mountain Road to DiGiorgio Road.

Additional background about this: Accurate characterization of the air quality in the San Joaquin Valley is one of EPA's top priorities. Therefore, ensuring that the move of the Arvin-Bear Mountain Road ozone monitor meets EPA's regulatory requirements is essential. If a monitoring agency must relocate a monitor due to circumstances beyond their control, EPA regulations require that they submit a justification that the relocation does not compromise data collection needed for implementation of a NAAQS, and that the nearby replacement site represents generally the same air quality conditions -- our regulations say the "same scale of representation." CARB has not yet submitted the request for the relocation of the ozone monitor at Arvin-Bear Mountain Road, nor have they provided the required analysis to justify the site closure. Therefore, EPA has not approved the relocation at this time.

11. Where are the 1-hour violations happening?

Short answer:

- In the SC – eastern and northern portion such as Crestline
- In the SJV – central and southern portions, such as Arvin, Fresno, Bakersfield
- In the Southeast Desert – Victor Valley in the Mojave Desert and Coachella Valley in the Sonoran Desert

Long Answer:

- SC: There are 29 ozone monitoring sites in the SC. The highest ozone concentrations are in the northern and eastern portions of the SC. There are 16 monitors that did not meet the standard during 2008-2010, with the highest number of expected exceedances of 10.4 days (3-year average) at the Crestline monitor.
- SJV: There are 22 ozone monitoring sites in the SJV. The highest ozone levels occur in the central (e.g., Fresno area) and southern (south of Bakersfield) portions of the Valley. There are 8 monitors that did not meet the standard during 2008-2010, with the highest number of expected exceedances of 6.6 days (3-year average) at the Arvin monitor. The State and District have flagged certain ozone exceedances in 2008 and 2010; however, even if EPA were able to concur on all of the flagged exceedances, the Arvin monitoring site would still violate the 1-hour standard.
- Southeast Desert: There are 9 ozone monitoring sites in the Southeast Desert. There are 4 monitors that did not meet the standard during 2005-2007, with the highest number of expected exceedances of 2.3 days (3-year average) at the Palm Springs and Hesperia monitors.